

American Journal of Health, Medicine and Nursing Practice (AJHMN)



Telemedicine and COVID-19: Experience of Medical Doctors in Cameroon.

*Kouotou Emmanuel Armand
Ananfack Nguefack Eric Gaël
Ngowa Nzali Franck Marcien
Ndjitoyap Ndam Antonin Wilson
Mendouga Menye Coralie Reine
Ndjitoyap Ndam Elie Claude*



Telemedicine and COVID-19: Experience of Medical Doctors in Cameroon

Kouotou Emmanuel Armand^{1,2}, Ananfack Nguéfack Eric Gaël^{1*}, Ngowa Nzali Franck Marcien¹, Ndjitoyap Ndam Antonin Wilson¹, Mendouga Menye Coralie Reine^{3,4}, Ndjitoyap Ndam Elie Claude¹

¹Faculty of Medicine and Biomedical Sciences, University of Yaoundé I; ²Yaounde Central Hospital; ³National Public Health Laboratory, Yaoundé (Cameroon); ⁴Public Health Emergency operations Coordination Center, Yaoundé (Cameroon)

*Corresponding Author's Email: gaelnguef@gmail.com

Abstract

Introduction : Since the beginning of Coronavirus disease2019 (COVID-19), hospitals and health centres have become sites of potential contamination and spread of the virus, and have had to reorganize their working environments to limit infections of patients and health care providers while continuing to render health services for those affected by other ailments. The purpose of the study was to conduct a descriptive study to assess the practice of telemedicine among Cameroonian medical doctors through an electronic survey.

Methodology: This was a cross-sectional study conducted from May to June 2020 using an online data collection form designed on Google Forms. The questions dealt with socio-demographic data, the cancellation rate of appointments, the practice of teleconsultation, the frequency of telephone use, the means of teleconsultation used and the quality of the doctor-patient relationship. Participants comprised all physicians practicing in Cameroon using information and communication technologies

Results: A total of 253 participants were included, 56.5% of which were women. Physicians from the ten regions of the country were represented. Twenty percent (20.2%) of physicians practiced teleconsultation, of which 3.2% continued teleconsultations while in quarantine. Seventy-five percent (75.4%) of physicians used multiple communication modalities at the same time; the most used modality in combination with others was the WhatsApp android application. Forty-six percent (41.6%) of participants judged that the doctor-patient relationship was poor during teleconsultations.

Conclusion and recommendation: The practice of telemedicine is not widespread and is poorly framed in this setting. Regulatory authorities should put in place regulations and provide training to frame and ease access to the use of telemedicine.

Keywords: *COVID-19, Telemedicine, Doctors, Cameroon*

Introduction

Since the onset of the 2019 coronavirus disease (COVID-19), various countries have taken measures to counter the spread and lethality of the virus. One of the most popular measures has been individual confinement [1]. As a result, many industries have adopted teleworking strategies. The medical sector, in this case, saw an exponential rise in the use of teleconsultation means [2].

According to the World Medical Association, telemedicine is the practice of medicine from a distance, in which interventions, diagnoses, treatment decisions and treatment recommendations are based on patient data, documents and other information transmitted by patients and telecommunication systems [3]. Responding to a general objective of better access to healthcare, its interest appears all the more marked in the current context linked to the management of COVID-19. Teleconsultations makes it possible to continue to take care of patients who are unable to travel for various reasons. It thus provides solutions to the steadfast problems of continuity of care and medical activity while limiting the risks of spread of the coronavirus within establishments rendering health services [2].

In Cameroon, the internet penetration rate rose from 4.3% in 2010 to nearly 35% in 2018 according to the National, Information and Communication Technology Agency (ANTIC) [4]. In line with the limitations of physical interactions imposed by COVID-19, we aimed to evaluate the impact of the pandemic on the use of telemedicine in Cameroon.

Methodology

This was a cross-sectional study conducted using an online survey designed on Google Forms. Participants included Physicians practicing in Cameroon at the time of the survey. The link (French version: <https://forms.gle/RxY1WVzX8gTz6C6N8>; English version: <https://forms.gle/9GCxemxnrBHov3me9>) was sent through the WhatsApp groups general practitioners, specialists, residents, interns and 7th year medical students. The questions were mixed made up of close-ended questions and questions with a Likert scale. There were in all 55 questions on socio-demographic characteristics of participants (age, sex, residence, marital status, site of practice), the rate of cancellation of appointments, the practice of teleconsultation, the frequency of telephone use, and the means of teleconsultation used and on the quality of the doctor-patient relationship. To improve participation rate, the messages were sent for the first time when the survey was launched on May 2nd, 2020 and reminder messages were sent halfway through the study period then, at three weeks. The data was collected over a period of one month from May 2nd to June 1st, 2020. Analyses were performed using Statistical Package for Social Sciences (SPSS) version 20.0 software. All data were expressed in proportions and frequencies. A p-value <0.05 was considered statistically significant.

Results

• Socio-demographic characteristics

In total, there were 253 participants of which 56.5% were females. Participants were young with majority in the 20 to 30years age group (43.9%). The ten regions of the country were represented. The Center region was the most represented with 155 (61.3%) participants; the least represented were the North West and East regions with 1 (0.4%) turnout each. The

majority of participants were general practitioners 37.2%, followed by consultants 26.9% (Figure 1). Participants lived (91.7%) and exercised (84.6%) mainly in urban areas.

- Practice of teleconsultation

As a result of the COVID-19 pandemic, 65 participants (25.7%) reported to have cancelled 50-75% of their face-to-face consultation. Eighty-four percent (84.5%) of the study population reported an increase in the use of their phones as result of the pandemic as well as an increased use of webinars and video conferences. Of all the doctors, 20.2% practiced a teleconsultation activity among which 3.2% had a teleconsultation activity while being quarantined.

Regarding the different means used during teleconsultation activities, 24.6% used only one teleconsultation tool. This included either phone calls in 13.1% or WhatsApp in 9.9%. The rest used two or more tools at the same time (WhatsApp, SMS, phone call, Skype). WhatsApp was the mostly used telecommunication tool in combination with at least one other tool – mostly traditional phone calls and traditional messages.

Forty-one percent (41.6%) of participants felt that their doctor-patient relationship was poor during teleconsultations, while 22% thought it was very poor. In contrast 18.7% reported their relationship with patients was not significantly changed (Figure 2). During the investigation, 6% of the doctors felt that they could do more and more teleconsultations.

Discussion

The COVID-19 pandemic has imposed restrictions in social interactions worldwide. Contacting a health care professional remotely makes it possible, in these times, to respond more quickly to the needs of patients with chronic diseases or acute problems, while keeping efficient and good quality care. Beyond its contribution to improving the quality of health care provision, telemedicine could also help address territorial inequalities in health [5] in resource limited settings. Urban, rural, semi-rural would thus benefit from more or less equitable availability of healthcare services [6].

In this e-Survey, more than 80% of our respondents lived and worked in urban areas. These results are far superior to those of Cabot whom in a thesis on the use and knowledge of teleconsultation by private practitioners in Maine et Loire, showed that the trend was to practice more in an urban environment (45.1%) than in rural areas (33.1%) [7]. This results could be explained by the low internet penetrance in rural areas. In rural areas, the internet access rate is 1.4% unlike in urban areas where there is a 12.3% home internet access rate in Cameroon [8].

The majority of participants were general practitioners (37.2%), followed by specialist physicians (26.9%). Though different in magnitude, this was a trend similar to the participant distribution obtained by Cabot in which 77% of respondents were general practitioners.

Regarding the use of telecommunications, before this crisis, in Cameroon in particular and in Sub-Saharan Africa in general, teleconsultation was not part of the daily life of caregivers [9]. In fact, in this study, 84.5% of responding physicians reported they had increased their use, and were more interested in telecommunications during the COVID-19 period than they were prior to the pandemic. Of all participants, 20.2% were engaged in teleconsultation. These figures are much lower than those found in France where 75% of general practitioners have set up a teleconsultation system since the start of the COVID-19 pandemic [10].

Telemedicine is part of the health strategy of many countries. However, until the current exceptional situation, it was seen primarily as a means of combating inequalities in access to care. In the United States, the development of telemedicine dates back to the 1990s and has emerged as a way to address many public health challenges. In France, it is at the heart of the "My health 2022" plan [11] sponsored by the government with the aim of freeing up time for health professionals and facilitating access to care. In other parts of the world, such as Sweden, e-health and telemedicine are an integral part of the medical landscape [12]. In India, there were no laws on the practice of telemedicine until March 2020, when the Indian Ministry of Health drafted guidelines to enable providers to harness the full potential of technology in the delivery of healthcare [9]. In sub-Saharan Africa some countries like Mali, Mauritania and Togo were already exposed to telemedicine [13]. Mali, for example, since 2015 has started an original dermatological tele-expertise program called "TELEDERMALI", with convincing results [14].

Most of the respondents to the survey (75.6%) used several communication methods at the same time to interact with their patients. The most widely used form of exchange was the WhatsApp application. This could be explained by the fact that the WhatsApp application is easy to access, inexpensive and offers messaging, voice calling and video options; it is also the third most used social network in the world after Facebook and YouTube [15,16].

Regarding the quality of the doctor-patient relationship, 41.6% felt that the relationship was less good during the teleconsultations. This resentment could be due to the fact that the doctors often need to inspect, palpate, auscultate, and touch the patient to refine their diagnosis. This could also be explained by the fact that many doctors feel they are losing some of their "power" by practicing teleconsultation. Likewise, a study carried out in France reports that more than half of the doctors who made a teleconsultation consider that the clinical examination in person remains often or systematically essential [10].

Conclusion

Telemedicine is experiencing an unprecedented boom. Health professionals on the front line of COVID-19 are rapidly adopting new technologies making it possible to limit the spread of the virus. In Cameroon, 20.2% of doctors have taken up teleconsultations during this pandemic and they most often use the WhatsApp application. Far from the social distancing aspect vis-à-vis the virus, teleconsultation is unique in that it facilitates access to care for people who do not have easy access to health centers. It therefore makes possible to address the territorial problem health inequalities. This technology would be a major asset for developing countries where access to health care is still a huge problem.

Recommendations: Regulatory authorities should put in place regulations and provide training to frame and ease access to the use of telemedicine.

References

- 1- <https://www.euro.who.int/fr/health-topics/noncommunicable-diseases/mental-health/data-and-resources/mental-health-and-covid-19>
- 2- https://solidarites-sante.gouv.fr/IMG/pdf/covid-19_teleconsultation-fiche-medecin.pdf
- 3- WMA Statement on the Ethics of Telemedicine. Available at <https://www.wma.net/policies-post/wma-statement-on-the-ethics-of-telemedicine/>. Accessed 18 September 2020
- 4- <https://www.antic.cm/index.php/fr>

- 5- Kubiak Y. Le Pacte territoire santé, garant de qualité et d'accessibilité des soins. Paris : Institut national de la statistique et des études économiques, Dossier Lorraine numéro 1. mai 2015 ; Disponible sur : http://www.insee.fr/fr/insee_regions/lor/themes/inseedossier/lor_ind_01/lor_ind_01_fic5.pdf
- 6- Le Breton-Lerouvillois G, Rault J-F. Atlas de la démographie médicale en France [internet]. Conseil national de l'ordre des médecins ; janvier 2015. Disponible sur : <https://www.conseil-national.medecin.fr/node/1607>
- 7- CABOT Grégoire. Utilisation et connaissances de la téléconsultation par les médecins libéraux du Maine et Loire Etat des lieux à l'heure de la généralisation de la téléconsultation. Thèse pour le diplôme d'état de docteur en médecine Qualification en médecine générale. 2019-2020.
- 8- <https://agencecamerounpresse.com/economie/cameroun-le-taux-d%E2%80%99acc%C3%A8s-d%E2%80%99internet-en-zones-rurales-est-de-1,4.html>
- 9- EG AnanfackNguefack, SP Medoua Bella, G Ndiparah, N V NjedockSontsa, AR Nana, EA Kouotou. COVID-19: trigger of better health systems in Sub-Saharan Africa? *GSJ: Volume 8, Issue 8, August 2020*
- 10- Martin Monziols, Hélène Chaput, Pierre Verger, Dimitri Scroniaset Bruno Ventelou. Trois médecins généralistes sur quatre ont mis en place la téléconsultation depuis le début de l'épidémie de Covid-19. *Etudes&Resultats*. Sept 2020, N°1162. disponible sur www.data.drees.sante.gouv.fr
- 11- Ma santé 2022 : un engagement collectif. Ministère des Solidarités et de la Santé. 2020 [cité le 16 juillet 2020]. Disponible sur : solidarites-sante.gouv.fr/systeme-de-sante-et-medico-social/masante2022
- 12- Agence française de la santé numérique. Étude comparative sur le développement de la télémédecine à l'international. 2019 Disponible sur : esante.gouv.fr/sites/default/files/media_entity/documents/ASIP_TLM_Etude_comparative_developpement_telemedecine_international_VF2.pdf
- 13- B. Saka, E. Laouressergues, G. Mahamadou, L. Matel, CAE.O.S. Abilogoun, H.D. Adégbidi, et al. Deuxièmes assises de télédermatologie africaines — Lomé (Togo). *Presse Med Form 2020; 1: 198–202*
- 14- Faye O, Bagayoko CO, Dicko A, et al. A Teledermatology pilot programme for the management of skin diseases in primary health care centres: experiences from a resource-limited country (Mali, West Africa). *Trop Med Infect Dis 2018;3(3):88*.
- 15- Maurice MARS and Richard E SCOTT. WhatsApp in Clinical Practice: A Literature Review. Available at: <https://pubmed.ncbi.nlm.nih.gov/27782019/>
- 16- StatistaResearchDepartment. Réseaux sociaux classés selon le nombre d'utilisateurs mondiaux 2019 .8 avr. 2019. Available at: <https://fr.statista.com/statistiques/570930/reseaux-sociaux-mondiaux-classes-par-nombre-d-utilisateurs/>

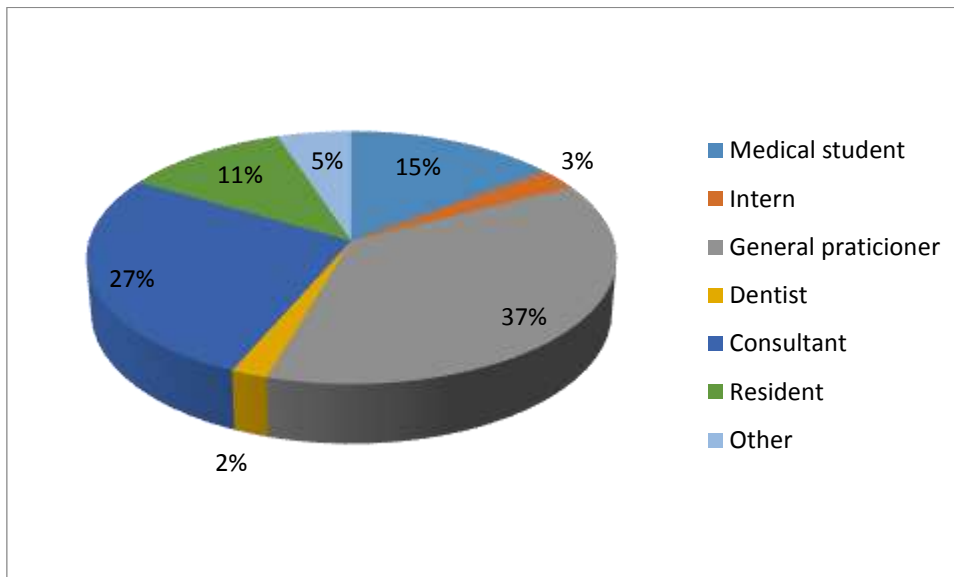


Figure 1: distribution of the study population by qualifications

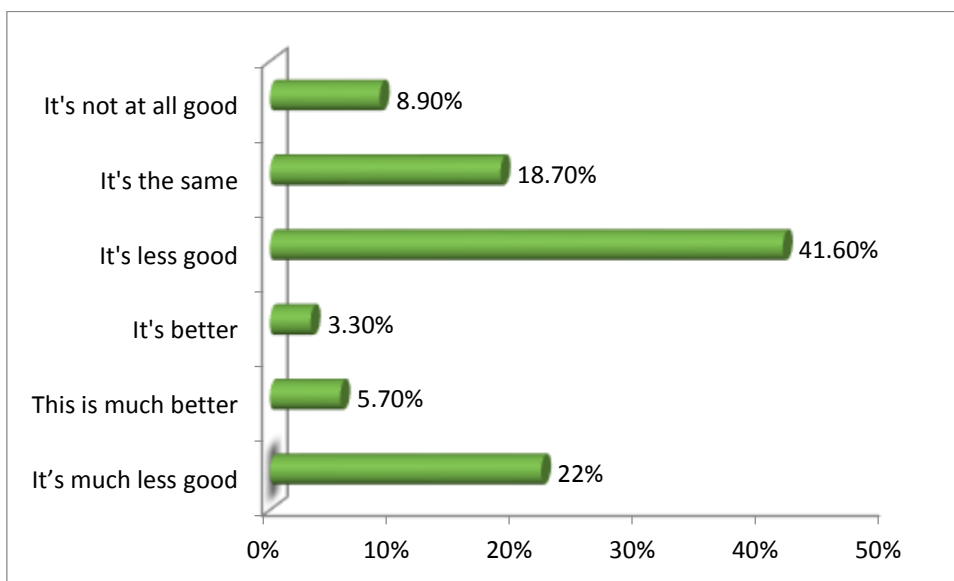


Figure 2: perception of the quality of the doctor-patient relationship during teleconsultations